

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

What is claimed is:

1. (currently amended) A method for providing collated, face-up printing in a duplex printer, said method comprising:
 - creating a spool data file comprising spool data corresponding to a print job;
from said spool data file, creating a page-independent index file comprising a first plurality of records, wherein each record in said first plurality of records comprises location information and extraction information for an associated portion of said spool data in said spool data file; header data, footer data, and data corresponding to the front and the back of each page of said print job from said spool data file;
 - manipulating said first plurality of records in said page-independent index file to effect define a collated, face-up printing job, thereby producing a manipulated page-independent index file; ~~and~~
 - from a print processor, accessing said manipulated page-independent index file to determine portions of said spool data in said spool data file required for said collated, face-up print job;
 - from said spool data file, extracting said portions of said spool data in said spool data file required for said collated, face-up print job, thereby producing combined spool data for said collated, face-up print job; and

converting said combined spool data to printer-ready data.

~~converting said manipulated page-independent index file into printer-ready data
using a print processor customized to use said manipulated page-independent
index file.~~

2. (original) The method of claim 1 wherein said spool data file is a Microsoft Windows Job Description File.
3. (original) The method of claim 1 wherein said manipulation comprises changing the order in which pages are printed.
4. (previously presented) The method of claim 1 wherein said page-independent index file further comprises print job commands, page commands and page data.
5. (previously presented) The method of claim 1 wherein said page-independent index file provides access to at least one Enhanced Metafile (EMF) file.
6. (previously presented) The method of claim 1 wherein said page-independent index file provides access to at least one raw format file.
7. (previously presented) The method of claim 1 wherein said manipulation of said page-independent index file comprises changing the side of a duplex page on which printing occurs.

8. (currently amended) A method for providing driver-independent, printer-independent collated, face-up printing in a duplex printing system, said method comprising:

creating a spool data file comprising spool data corresponding to a print job;
from said spool data file, creating a Page-Independent Spool File (PISF) index file
comprising a first plurality of records, wherein each record in said first plurality
of records comprises location information and extraction information for an
associated portion of said spool data in said spool data file; ~~header data, footer~~
~~data, and data corresponding to the front and the back of each page of said print~~
~~job from said spool data file;~~
allowing manipulation of said first plurality of records in said PISF index file to
~~effect~~ define a collated, face-up printing job, thereby producing a manipulated
PISF index file; ~~and~~
from a print processor, accessing said manipulated PISF index file to determine
portions of said spool data required for said collated, face-up print job;
from said spool data file, extracting said portions of said spool data in said spool
data file required for said collated, face-up print job, thereby producing combined
spool data for said collated, face-up print job; and
converting said combined spool data to printer-ready data.~~manipulated PISF index~~
~~file into printer ready data using a print processor customized to use said~~
~~manipulated PISF index file.~~

9. (withdrawn) A method for providing face-up, collated output in a printing system, said method comprising:
- creating a page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job;
 - manipulating said page-independent spool index file to effect face-up, collated output, thereby producing a manipulated page-independent spool index file; and
 - converting said manipulated page-independent spool index file into printer-ready data using a print processor customized to use said manipulated page-independent spool index file.
10. (withdrawn) The method of claim 9 wherein said creating, said manipulating and said accessing are accomplished through a print processor.
11. (withdrawn) The method of claim 9 wherein said creating, said manipulating and said accessing are accomplished through a spooler.
12. (withdrawn) The method of claim 9 wherein said creating, said manipulating and said accessing are accomplished through a print assistant between a driver and a printer.

13. (withdrawn) A method for adding collated, face-up output capability to a printing system, said method comprising:

- initiating a print job for a document;
- creating a page-independent spool index file comprising header data, footer data, and data corresponding to the front and the back of each page of said print job;
- modifying said page-independent spool index file to reconfigure said print job to output in a face-up, collated orientation; and
- accessing said modified page-independent spool index file using a print processor customized to use said modified page-independent spool index file, to obtain document formatting information for printing.

14. (withdrawn) The method of claim 13 wherein said page-independent spool index file is produced by a print system component in a print system between a driver and a printer.

15. (withdrawn) A printing system with driver-independent, printer-independent document formatting, said system comprising:

- a print processor comprising:
 - an indexer for creating a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job;

a modifier for modifying said page-independent index file to produce print output in a face-up, collated orientation; and
a reader for accessing said modified page-independent index file to execute a modified print job.

16. (withdrawn) A computer-readable medium comprising computer instructions for driver-independent, printer-independent collated, face-up printer output, said computer instructions comprising the acts of:

creating a page-independent index file comprising header data, footer data, and data corresponding to the front and the back of each page of a print job;
manipulating said page-independent index file to effect a collated, face-up output orientation, thereby producing a manipulated page-independent index file; and
converting said manipulated page-independent index file into printer-ready data using a print processor customized to use said manipulated page-independent index file.

17. (canceled)

18. (new) The method of claim 1 wherein said manipulation comprises a page-order pass, a page-scale-and-placement pass, and a sheet-collation pass.

19. (new) The method of claim 1 wherein said manipulation effectuates the printing of a first page in said collated, face-up print job on a first-side of a first sheet of paper when said collated, face-up print job is printed on a duplex printer, wherein a page in said print job corresponding to said first page in said collated, face-up print job is printed on a second-side of a second sheet of paper when said print job is printed on said duplex printer, wherein said first-side of said first sheet of paper and said second-side of said second sheet of paper correspond to opposite sides of said first sheet of paper and said second sheet of paper when said first sheet of paper and said second sheet of paper are placed in said duplex printer.

20. (new) The method of claim 8 wherein said manipulation comprises a page-order pass, a page-scale-and-placement pass, and a sheet-collation pass.

21. (new) The method of claim 8 wherein said manipulation effectuates the printing of a first page in said collated, face-up print job on a first-side of a first sheet of paper when said collated, face-up print job is printed on a duplex printer, wherein a page in said print job corresponding to said first page in said collated, face-up print job is printed on a second-side of a second sheet of paper when said print job is printed on said duplex printer, wherein said first-side of said first sheet of paper and said second-side of said second sheet of paper correspond to opposite sides of said first sheet of paper and said second sheet of paper when said first sheet of paper and said second sheet of paper are placed in said duplex printer.